



## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Nicos A. Petasis Art Unit: Unknown Serial No.: 10/633,760 Examiner: Unknown

Filed: August 4, 2003

Title : COMBINATORIAL APPROACH TO CHIRAL REAGENTS OR CATALYSTS

HAVING AMINE OR AMINO ALCOHOL LIGANDS

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

## TRANSMITTAL OF INFORMATION DISCLOSURE STATEMENT

#### Dear Sir:

Transmitted herewith, via hand delivery, for filing in connection with the above-identified application are the following: an Information Disclosure Statement (2 pages); Form PTO-1449 (4 pages); and, cited references (1 box containing 3 Volumes). Because this Information Disclosure Statement is filed prior to receipt of a First Office Action on the merits in the above-identified application, no fee is due. However, should it be determined that a fee for filing these papers is required, the Commissioner is authorized to charge Deposit Account No. 06-1050.

Respectfully submitted,

Date: March 29, 2004

Dale L. Rieger Reg. No. 43,045

Fish & Richardson P.C. 12390 El Camino Real San Diego, California 92130 Telephone: (858) 678-5070 Facsimile: (858) 678-5099

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# INFORMATION DISCLOSURE STATEMENT IN ACCORDANCE WITH 37 C.F.R. 1.97-1.98

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

#### Dear Sir:

Because this Information Disclosure Statement is filed before the receipt of a First Office Action on the Merits for the above-captioned application, a fee for filing this statement should not be due. If, however, it is determined that a fee is due, any fees that may be due in connection with filing this paper may be charged to Deposit Account No. 06-1050.

In accordance with the duty of disclosure imposed by 37 C.F.R. 1.56 to inform the Patent Office of all references known by Applicant or Applicant's representative that may be material to the examination of the subject application, Applicant's representative hereby provides this Information Disclosure Statement that is prepared in accordance with 37 C.F.R. 1.97-1.98. Forms PTO-1449 (4 pages) and copies of the cited documents are provided herewith.

The documents cited on the Forms PTO-1449 are in the English language, with the exception of Item BB. Items BB (journal article by Konig *et al.*) is in the German language and contains an English language abstract on page 1. Hence, in accordance with the requirements of 37 C.F.R. 1.98, as amended effective March 16, 1992, no further explanation of the listed items is necessary.

Applicant also makes known to the Examiner the following pending U.S. and International Applications that have one or more common inventors and/or are commonly owned:

Attorney's Docket No.: 06666-025002

Applicant: Nicos A. Petasis Serial No.: 10/633,760 Filed: August 4, 2003

Page : 2 of 2

U.S.S.N.(App. no.)	Filing Date	Docket No.
10/386,389	03/10/2003	06666-139001
10/405,922	04/01/2003	06666-142001
10/405,924	04/01/2003	06666-143001
10/405,927	04/01/2003	06666-144001

Although these documents are made known to the Patent and Trademark Office in compliance with Applicant's duty of disclosure, such disclosure is not to be construed as an admission by Applicant or Applicant's representative that any of the references, singly or in any combination thereof, is effective as prior art against the subject application. In accordance with 37 C.F.R. 1.97(h), the filing of this Information Disclosure Statement shall not be construed to mean that a search has been made or that no other material information as defined in 37 C.F.R. 1.56(b) exists.

Applicant respectfully requests that the Examiner review the foregoing references and they be made of record in the file history of the above-captioned application.

Respectfully submitted,

Date: March 29, 2004

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Substitute Form PTO-1449 (Modified)

U.S. Department of Commerce Patent and Tracemark Office

Attorney's Docket No. 06666-025002

Application No. 10/633,760

Information Disclosure Statement

by Applicant (Use several sheets if necessary) MAR 3 0 2004

Applicant Nicos A. Petasis

Filing Date

**Group Art Unit** 

(37 CFR §1.98(b))

August 4, 2003

U.S. Patent Documents							
Examiner Initial	Desig. ID	Document Number	Publication Date	Patentee	Class	Subclass	Filing Date If Appropriate
	Α	2003/0236423	12/25/02	Petasis	554	61	04/01/03
	В	4,442,099	04/10/84	Nicolaou et al.	424	248.57	11/27/81
	С	4,567,290	01/28/86	Nicolaou et al.	560	124	09/01/83
	D	4,710,521	12/01/87	Soukup et al.	521	118	07/25/86
	Е	4,759,880	07/26/88	Nicolaou et al.	260	413	09/27/84
	F	5,087,790	02/11/92	Petasis et al.	585	638	06/12/91
	G	5,136,501	08/04/92	Silverman et al.	364	408	05/26/89
	Н	5,177,046	01/05/93	Savoca et al.	502	167	11/18/91
	I	5,594,732	01/14/97	Bell et al.	370	401	03/03/95
	J	5,752,238	05/12/98	Dedrick	705	14	11/03/94
	K	5,756,789	05/26/98	Bruce et al.	556	14	06/03/96
	L	5,842,040	11/24/98	Hughes et al.	395	831	06/18/96
	M	5,845,265	12/01/98	Woolston	705	37 .	11/07/95
	N	5,870,717	02/09/99	Wiecha	705	26	11/13/95
	0	5,878,400	03/02/99	Carter, III	705	20	06/17/96
	P	5,878,423	03/02/99	Anderson et al.	707	100	04/21/97
	Q	5,890,138	03/30/99	Godin et al.	705	26	08/26/96
	R	5,896,379	04/20/99	Haber	370	390	08/26/96
	S	5,946,467	08/31/99	Pathakis et al.	395	200.66	11/07/96
	Т	6,030,715	02/29/00	Thompson et al.	428	690	10/09/97
	U	6,030,917	02/29/00	Weinberg et al.	502	104	07/22/97
	V	6,069,109	05/30/00	Kao et al.	502	152	07/01/98
	W	6,232,467	05/15/01	Petasis et al.	544	171	06/27/97
	Х	6,259,699	07/10/01	Opalka et al.	370	398	12/30/97
	Y	6,272,474	08/07/01	Garcia	705	37	02/08/99
	Z	6,336,105	01/01/02	Conklin et al.	705	80	11/16/98
	AA	6,336,138	01/01/02	Caswell et al.	709	223	08/25/98

**Examiner Signature** 

Date Considered

EXAMINER: Initials citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Substitute	Form	PTO-1449
(Modified)		

U.S. Department of Commerce Patent and Trademark Office

Application No. Attorney's Docket No. 10/633,760 06666-025002 Applicant

# **Information Disclosure Statement by Applicant** (Use several sheets if necessary)

Nicos A. Petasis Filing Date Group Art Unit

August 4, 2003

(37	CFR	§1.98	(b))

	U.S. Patent Documents								
Examiner Initial	Desig. ID	Document Number	Publication Date	Patentee	Class	Subclass	Filing Date If Appropriate		
	AB	6,377,937	04/23/02	Paskowitz	705	26	05/28/98		
	AC	6,397,212	05/28/02	Biffar	707	5	03/04/99		
	AD	6,415,270	07/02/02	Rackson et al.	705	37	11/15/99		
	AE	6,427,132	07/30/02	Bowman-Amuah	703	22	08/31/99		
	AF	6,602,817	08/05/03	Petasis	502	172	10/22/99		

	Foreign Patent Documents or Published Foreign Patent Applications							
Examiner	Desig.	Document	Publication	Country or		0 1 1		lation
Initial	ID	Number	Date	Patent Office	Class	Subclass	Yes	No
	AG	0 736 509 A2	10/09/96	EP				
	AH	0 736 509 B1	11/14/01	EP				
	AI	WO 97/19415	05/29/97	PCT		•		
	AJ	WO 98/19259	05/07/98	PCT				
	AK	WO 98/35469	08/13/98	PCT				
	AL	WO 99/06913	02/11/99	PCT				
	AM	WO 99/13417	03/18/99	PCT				

	Other Documents (include Author, Title, Date, and Place of Publication)					
Examiner	Desig.					
Initial	ID	Document				
	AN	Babine, R. E. and S.L. Bender., "Molecular Recognition of Protein-Ligand Complexes: Applications to Drug Design," <i>Chem. Rev.</i> 97:1359-1472 (1997)				
	AO Bhaley, G. et al., "Solid-Phase Synthesis of Diverse Tetrahydro-1,4-Benzodiazepine-2-ones," Tetrahedron Letters 38(48):8375-8378 (1997)					
	AP	Bläser, E. et al., "Asymmetric Steering of Oxa Diels – Alder Reactions with Silyloxydienes Employing Proline Esters as Chiral Auxiliary Groups," Eur. J. Org. Chem., 329-333, (1999)				
	AQ	Deloux, Laurent and Morris Srebnik "Asymmetric Boron-Catalyzed Reactions", Chem. Rev. 93:763-784, (1993)				
	AR	Durantel. et al., "Study of the Mechanism of Antiviral Action of Iminosugar Derivatives against Bovine Viral Diarrhea Virus," J. Virology 75(19): 8987-8998, (2001)				
	AS	Du Bois, et al., "Novel, Stereoselective Synthesis of 2-Amino Saccharides," J. Am. Chem. Soc. 119:3179-3180, 1997				
	AT	Evans, B.E. et al., "Design of Nonpeptidal Ligands for a Peptide Receptor: Cholecystokinin Antagonists," J. Med. Chem. 30:1229-1239 (1987)				

Examiner Signature	Date Considered
EXAMINER: Initials citation considered. Draw line through citation if no next communication to applicant.	l It in conformance and not considered. Include copy of this form with

Substitute Form PTO-1449 (Modified)	U.S. Department of Commerce Patent and Trademark Office	Attorney's Docket No. 06666-025002	Application No. 10/633,760	
Information Discl by App	1	Applicant Nicos A. Petasis		
(Use several sheets if necessary) (37 CFR §1.98(b))		Filing Date August 4, 2003	Group Art Unit	

	Other D	ocuments (include Author, Title, Date, and Place of Publication)
Examiner Initial	Desig. ID	Document
	AU	Fletcher, M. D. and M.C. Campbell, "Partially Modified Retro-Inverso Peptides: Development, Synthesis, and Conformational Behavior," <i>Chem. Rev.</i> , 98:763-795, (1998)
	AV	Garro-Helion, et al., "Mild and Selective Palladium(0)-Catalyzed Deallylation of Allylic Amines. Allylamine and Diallylamine as Very Convenient Ammonia Equivalents for the Synthesis of Primary Amines," J. Org. Chem., 58:6109-6113, (1993)
	AW	Golebiowski, A. and J. Jurczak, "α-Amino-β-hydroxy Acids in the Total Synthesis of Amino Sugars," Synlett, pp.241-245, (April, 1993)
	AX	Guillier et al., "Linkers and Cleavage Strategies in Solid-Phase Organic Synthesis and Combinatorial Chemistry," Chem. Rev., 100:2091-2157, (2000)
	AY	Hanessian, S. et al., "Design and Synthesis of Conformationally Constrained Amino Acids as Versatile Scaffolds and Peptide Manners," <i>Tetrahedron</i> , 53:12789-12854, (1997)
	AZ	Hoyng, C.F. and A.D. Patel, "Aldehyde Components for Use in Four-Component Condensation ("4CC") UGI Reaction Peptide Synthesis, " <i>Tetrahedron Lett.</i> , 21:4795-4798, (1980)
	BA	Humphrey, J.M. and A.R. Chamberlin, "Chemical Synthesis of Natural Product Peptides: Coupling Methods for the Incorporation of Noncoded Amino Acids into Peptides," <i>Chem. Rev.</i> , 97:2243-2266, (1997)
	ВВ	König et al., "Synthesis of N-tert-Alkylglyoxylic Acid Amides," Synthesis, pp.1233-1234, (1993) [in German, English language abstract on 1st page of article]
	ВС	Marx et al., "Synthetic Design for Combinatorial Chemistry. Solution and Polymer-Supported Synthesis of Polycyclic Lactams by Intramolecular Cyclization of Azomethine Ylides," J. Am. Chem. Soc., 119:6153-6167, (1997)
	BD	Mehta et al., "Structure-Activity Relationship of a New Class of Anti-Hepatitis B Virus Agents,"  Antimicrobial Agents and Chemotherapy, 46(12):4004-4008 (2002)
	BE	Nicolaou et al., "Novel IBX-Mediated Process for the Synthesis of Amino Sugars and Libraries Thereof," Angew. Chem. Int. Ed. Engl., 39:2525-2529, (2000)
	BF	Nicolaou, et al., "Lipoxins and Related Eicosanoids: Biosynthesis, Biological Properties, and Chemical Synthesis," Angew. Chem. Int. Ed. Engl. 30:1100-1116, (1991)
	BG	Noyori, R. (Ed.), "Enantioselective Addition of Organometallic Reagents to Carbonyl Compounds: Chirality Transfer, Multiplication, and Amplification," Chapter 5 in Asymmetrical Catalysis in Organic Synthesis, New York: John Wiley & Sons, Inc., pp. 255-297 (1994)
	ВН	Nugent, William A., "Chiral Lewis Acid Catalysis. Enantioselective Addition of Azide to Meso Epoxides", J. Am. Chem. Soc., 114(7): 2768-2769 (1992)
. 10	BI	O'Donnell, Martin J. and J. Falmagne, "The Synthesis of Amino Acids via Organoboranes." J. Chem. Soc. Chem. Commun., No. 17, pp. 1168-1169, (September 1, 1985)
	BJ	Petasis, N. A. and I.A. Zavialov, "The Boronic Acid Mannich Reaction: A New Method for the Synthesis of Geometrically Pure Allylamines." Tetrahedron Letters, 34(4):583-586, (1993)
	BK	Petasis, N.A. and I.A. Zavialov, "A New and Practical Synthesis of α-Amino Acids from Alkenyl Boronic Acids," J. Am. Chem. Soc., 119(2):445-446, (1997)
	BL	"Scope and Editorial Policy," <i>Organometallics</i> , published by the American Chemical Society 21(1):13A, 14A (2002).
	ВМ	Serhan et al., "Novel Functional Sets of Lipid-derived Mediators with Antiinflammatory Actions Generated from Omega-3 Fatty Acids via Cyclooxygenase 2-Nonsteroidal Antiinfammatory Drugs and Transcellular Processing, "J. Exp. Med. 192:1197-1204, (2000)

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Substitute Form PTO-1449 (Modified)	U.S. Department of Commerce Patent and Trademark Office	Attorney's Docket No. 06666-025002	Application No. 10/633,760
	closure Statement	Applicant Nicos A. Petasis	
(Use several sheets if necessary) (37 CFR §1.98(b))		Filing Date August 4, 2003	Group Art Unit

Other Documents (include Author, Title, Date, and Place of Publication)		
Examiner	Desig.	
Initial	ID	Document
	BN	Thompson, L.A. and J.A. Ellman, "Synthesis and Applications of Small Molecule Libraries," <i>Chem. Rev.</i> 96:555-600 (1996).
	во	Waki, M. and J. Meienhofer, "Peptide Synthesis Using the Four-Component Condensation (Ugi Reaction)," J. Am. Chem. Soc., 99:6075-6082, (1977)
· · ·	BP	Yamamoto, Y. and N. Asao, "Selective Reactions Using Allylic Metals." Chem. Rev., 93:2207-2293, (1993)

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